The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. (Withdrawn) An image processing method comprising:

an input step, of inputting at least two medical images taken at different points in time;

a difference image generating step, of generating a difference image by positioning two medical images input in said input step and subjecting image signals at corresponding coordinate points to difference processing;

a difference image storing step, of storing the difference image generated in said difference image generating step in a storage medium;

a reference difference value deciding step, of deciding a reference difference value in the difference image stored in said difference image storing step;

a state selecting step, of allowing a user to select a state of shadow change to serve as an indicator of interpreting the difference image generated in said difference image generating step;

a difference image processing step, of processing the difference image based on the reference difference value decided in said reference difference value deciding step and the state of shadow change selected in said state selecting step; and

an output step, of outputting the difference image processed in said difference

4

image processing step.

Claim 2. (Withdrawn) An image processing method according to Claim 1, wherein, in said reference difference value deciding step, the reference difference value is decided based on a histogram of difference values in the difference image.

Claim 3. (Withdrawn) An image processing method according to Claim 1, wherein, in said difference image processing step, the difference value of a region in a state not selected in said state selecting step is converted into the reference difference value.

Claim 4. (Withdrawn) An image processing method according to Claim 1, wherein, in said difference image processing step, said difference image is subjected to gradient conversion such that a region in a state not selected in said state selecting step is relatively low in contrast.

Claim 5. (Withdrawn) An image processing method according to Claim 1, further comprising:

a binary image generating step, of binarizing the difference image processed in said difference image processing step to generate a binary image; and

a counting step, of counting the number of regions having a predetermined area in the binary image generated in said binary image generating step,

wherein the processing results of said counting step are output with the

difference image in said output step.

Claim 6. (Withdrawn) An image processing method according to Claim 1, wherein the state of shadow change to be selected by a user in said state selecting step is selected from at least one of a state of displaying all shadows, a state of displaying increase of a shadow, and a state of displaying disappearance of a shadow.

Claim 7. (Withdrawn) An image processing apparatus comprising:

input means for inputting at least two medical images taken at different points in time;

difference image generating means for generating a difference image by positioning two medical images input by said input means and subjecting image signals at corresponding coordinate points to difference processing;

difference image storing means for storing the difference image generated by said difference image generating means in a storage medium;

reference difference value deciding means for deciding a reference difference value in the difference image stored by said difference image storing means;

state selecting means for allowing a user to select a state of shadow change to serve as an indicator of interpreting the difference image generated by said difference image generating means;

difference image processing means for processing the difference image based on the reference difference value decided by said reference difference value deciding means and

the state of shadow change selected by said state selecting means; and

output means for outputting the difference image processed by said difference image processing means.

Claim 8. (Withdrawn) An image processing apparatus according to Claim 7, wherein said reference difference value deciding means decides the reference difference value based on a histogram of difference values in the difference image.

Claim 9. (Withdrawn) An image processing apparatus according to Claim 7, wherein said difference image processing means converts the difference value of a region in a state not selected by said state selecting means into the reference difference value.

Claim 10. (Withdrawn) An image processing apparatus according to Claim 7, wherein said difference image processing means subjects the difference image to gradient conversion such that a region in a state not selected by said state selecting means is relatively low in contrast.

Claim 11. (Withdrawn) An image processing apparatus according to Claim 7, further comprising:

binary image generating means for binarizing the difference image processed by said difference image processing means to generate a binary image; and

counting means for counting the number of regions having a predetermined

area in the binary image generated by said binary image generating means,

wherein the processing results of said counting means are output with the difference image by said output means.

Claim 12. (Withdrawn) An image processing apparatus according to Claim 7, wherein the state of shadow change to be selected by a user by said state selecting means is selected from at least one of a state of displaying all shadows, a state of displaying increase of a shadow, and a state of displaying disappearance of a shadow.

Claim 13. (Currently Amended) An image processing method for generating a difference image from a first image and a second image, said method comprising:

a ~~control~~ decision step, of deciding ~~a gradient processing method such that shadow change regions are displayed in a predetermined manner based on image attributes of the first image and the second image~~ whether to display a shadow change region of the difference image as a negative image or a positive image;

~~a gradient~~ an image processing step, of changing ~~performing predetermined gradient processing on~~ the first image and/or the second image ~~following~~ into the negative image or the positive image based on the decision in said ~~control~~ decision step; and

a computing step, of computing a difference image from the first image and the second image ~~processed~~ changed in said ~~gradient~~ image processing step.

Claim 14. (Currently Amended) An image processing method according to Claim

8

13, said ~~control~~ decision step further comprising:

an image attributes acquisition step, of acquiring image attributes of the first image and the second image[[; and]],

~~a shadow definition input step in which a user selects a display method;~~

wherein ~~a gradient processing method is decided so as to carry out the display method input in said shadow definition input step, based on~~ said image processing step includes changing the first image and/or the second image into a negative image or a positive image based on the decision in said decision step and the image attributes of the first image and the second image acquired in said image attributes acquisition step.

Claim 15. (Currently Amended) An image processing method according to Claim 13, wherein said ~~gradient~~ image processing step includes a gradient inversion step, in which gradient inversion processing is performed on the first image and/or the second image.

Claim 16. (Canceled)

Claim 17. (Original) An image processing method according to Claim 13, wherein the first image and the second image are images taken of the same portion of a human body at different points in time.

Claims 18 and 19. (Canceled)

Claim 20. (Currently Amended) An image processing apparatus for generating a difference image from a first image and a second image, said apparatus comprising:

~~control~~ decision means for deciding ~~an image processing method such that shadow change regions are displayed in a predetermined manner based on image attributes of the first image and the second image~~ whether to display a shadow change region of the difference image as a negative image or a positive image;

~~gradient~~ image processing means for ~~performing~~ changing ~~predetermined gradient processing on~~ the first image and/or the second image ~~following~~ into the negative image or the positive image based on the decision of said ~~control~~ decision means; and

computing means for computing a difference image from the first image and the second image ~~processed~~ changed by said ~~gradient~~ image processing means.

Claim 21. (Currently Amended) An image processing apparatus according to Claim 20, said ~~control~~ decision means further comprising:

image attributes acquisition means for acquiring image attributes of the first image and the second image[[; and]],

~~shadow definition input means by means of which a user selects a display method;~~

wherein ~~a processing display method is decided so as to carry out the display method input by said shadow definition input means, based on~~ said image processing means includes means for changing the first image and/or the second image into a negative image or a positive image based on the decision in said decision means and the image attributes of the first

10

image and the second image acquired by said image attributes acquisition means.

Claim 22. (Currently Amended) An image processing apparatus according to Claim 20, wherein said ~~gradient~~ image processing means includes gradient inversion means, where gradient inversion processing is performed on the first image and/or the second image.

Claim 23. (Canceled)

Claim 24. (Original) An image processing apparatus according to Claim 20, wherein the first image and the second image are images taken of the same portion of a human body at different points in time.

Claims 25 and 26. (Canceled)

Claim 27. (Currently Amended) A ~~program for causing a~~ computer ~~to execute the processing steps of the image processing method according to any one of Claims 1 through 6 and Claims 13 through 19~~ executable program, stored on a computer-readable medium, having program codes for causing a computer to execute an image processing method for generating a difference image from a first image and a second image, said program comprising:

  a code for decision step, of deciding whether to display a shadow change region of the difference image as a negative image or a positive image;

  a code for an image processing step, of changing the first image and/or the

11

second image into the negative image or the positive image based on the decision in said decision step; and

a code for a computing step, of computing a difference image from the first image and the second image changed in said image processing step.

Claim 28.   (Currently Amended) A computer-readable storage medium storing a ~~program for causing a computer to execute the processing steps of the image processing method according to any one of Claims 1 through 6 and Claims 13 through 19~~ computer-executable program having program codes for causing a computer to execute an image processing method for generating a difference image from a first image and a second image, said program comprising:

a code for a decision step, of deciding whether to display a shadow change region of the difference image as a negative image or a positive image;

a code for an image processing step, of changing the first image and/or the second image into the negative image or the positive image based on the decision in said decision step; and

a code for a computing step, of computing a difference image from the first image and the second image changed in said image processing step.

Claims 29 and 30. (Canceled)